Title (en)

BOILER WATER LEVEL MONITORING

Publication

EP 0167257 B1 19890322 (EN)

Application

EP 85303608 A 19850522

Priority

US 61610184 A 19840601

Abstract (en)

[origin: EP0167257A1] The water level in a boiler 9 is monitored by a probe 15 driven by an AC source 11. If the water is high, the water resistance Rw completes a first current path i1 which charges C1 via D1 on alternate half-cycles and alternately charges and discharges C2 on successive half-cycles. C1 then transfers its charge through R2 to C3 via path i2, which has a long time constant (20 s). When C3 is charged, amplifier A1 energizes relay RL1, which closes contacts RL1/1, so modifying the characteristics of current loop i2, and closes contacts RL1/2, closing fuel valve 44 and allowing boiler 9 to be heated. If the water level falls, charging of C1 via loop i1 ceases; charging of C3 via the loop i2 (which now has R2 shunted out) ceases; and C2 discharges through D2 and R4 via loop i3. When the voltage on C3 falls enough, amplifier A1 output changes, de-energizing relay RL1, so opening contacts RL1/2 and turning off the boiler flame, and also opening contacts RL1/1 and so re-establishing the original characteristics of C3 charging current loop i2.

IPC 1-7

G01F 23/24; F22B 37/46; F24H 9/20

IPC 8 full level

G01F 23/24 (2006.01)

CPC (source: EP US)

G01F 23/243 (2013.01 - EP US)

Cited by

DE102006047780A1; CN105138024A; CN102679313A; US9146145B2; DE102016115715A1

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